



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,079	11/25/2003	Pantas Sutardja	MP0395	7976

26703 7590 07/19/2007
HARNES, DICKEY & PIERCE P.L.C.
5445 CORPORATE DRIVE
SUITE 200
TROY, MI 48098

EXAMINER

OLSON, JASON C

ART UNIT	PAPER NUMBER
----------	--------------

2627

MAIL DATE	DELIVERY MODE
-----------	---------------

07/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/722,079

Applicant(s)

SUTARDJA, PANTAS

Examiner

Jason C. Olson

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-104 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 31-36, 60-65, 70-72, 74-76 and 79 is/are allowed.
- 6) ☒ Claim(s) 11, 12, 15, 23, 24, 41, 42, 45, 46, 52, 53, 81 and 92 is/are rejected.
- 7) ☒ Claim(s) 13, 14, 16-21, 25, 30, 43, 44, 47-50, 54, 59, 82, 83, 85-87 and 93-98 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Continuation of Disposition of Claims: Claims withdrawn from consideration are 7-10,22,26-29,37-40,51,55-58,66-69,73,77-80,84,88-91 and 99-104.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Species III that includes figure 5 and encompasses claims 1-6, 11-21, 23-25, 30-36, 41-50, 52-54, 59-65, 70-72, 74-76, 81-83, 85-87, and 92-98 in the reply filed on 04/17/2007 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11, 12, 15, 23, 24, 41, 42, 45, 46, 52, 53, 81, and 92 are rejected under 35 U.S.C. 102(e) as being anticipated by Ko et al. (U.S. Pat. 6,765,736), hereafter, "Ko".

Regarding claim 11, Ko teaches a first counter that generates a first count of an attribute of a write signal that is output by said read channel circuit (see col. 4, ln. 38-48, col. 5, ln. 40-46, col. 6, ln. 41-53 and figures 3 and 5; detection circuit is a counter that monitors and generates an electromagnetic coupling signal or write safe signal 222 that is an attribute of a write signal 220 that is output by the communication circuit 180 or read channel circuit); and a second counter that generates a second count of said attribute of a looped-back write signal that is received by said read channel circuit (see col. 5, ln. 50-56, col. 6, lns. 6-10 and 18-24 and figures 3-5; a

Art Unit: 2627

threshold electromagnetic coupling signal value 228 is generated by a shorting the outputs 238 and 240 of the preamplifier 174 in a loop-back write signal received by the communication circuit 180 and is saved as a second count).

Regarding claim 12, Ko teaches a comparator that compares a difference between said first count and said second count to a threshold and that outputs a first state when said difference is less than said threshold and a second when said difference is not less than said threshold (see col. 5, ln. 50-56 and col. 6, ln. 4-15 and figure 7A; a difference between the write safe signal and the threshold signal is determined with peak detection and based on the difference an inoperable condition is determined to exist or not exist, steps 258 and 260).

Regarding claim 15, Ko teaches a read channel circuit and a preamplifier circuit that communicates with said read channel circuit and that includes a loopback circuit (see col. 4, ln. 34-48, col. 6, ln. 21-24 and figures 3 and 4; the communication circuit 180 is a read channel circuit that communicates with the preamplifier circuit 174 and includes a loopback circuit when the output terminals of 238 and 240 are short circuited).

Regarding claims 23, 24, 41, and 42: claims 23, 24, 41, and 42 have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above. Claim 41 however also recites the following limitations as taught by Ko: second edge counting means (see fig. 4; detection circuit 210 is an edge counting means).

Regarding claims 45, 46, 52, and 53: claims 45, 46, 52, and 53 have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above. Claim 46 however also recites the following limitations as taught by Ko: outputting said amplifies write

Art Unit: 2627

signal to a read/write device (see col. 4, lns. 15-24 and 34-48); and amplifying a read signal received from the read/write device (see col. 4, ln. 25-48).

Regarding claim 81, Ko teaches selectively operating said preamplifier circuit in a write mode (see col. 4, lns. 15-24 and 34-48); selectively operating said preamplifier circuit in a read mode (see col. 4, ln. 24-48); and selectively operating said preamplifier circuit in a write mode with loopback (see col. 6, ln. 21-24; shorting the output terminals 238 and 240 from the preamplifier is write mode with a loopback).

Regarding claim 92: claim 92 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed above. Claim 92 however also recites the following limitations as taught by Ko: receiving a read signal; and generating a second count of said attribute of said read signal (see col. 5, ln. 50-56, col. 6, lns. 6-10 and 18-24 and figures 3-5; a threshold electromagnetic coupling signal value 228 is generated by a shorting the outputs 238 and 240 of the preamplifier 174 in a loop-back write signal received by the communication circuit 180 and is saved as a second count. The loop-back write signal is a read signal because it is shorted from the output of the write driver 176 to the input of the read preamplifier 178).

Allowable Subject Matter

Claims 1-6, 31-36, 60-65, 70-72, and 74-76 are allowable over the prior art of record, which fails to teach a loopback circuit that selectively connects the output of the write amplifier to the output of the read amplifier.

Art Unit: 2627

Claims 13, 14, 16-21, 25, 30, 43, 44, 47-50, 54, 59, 82, 83, 85-87, and 93-98 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cyrusian (U.S. Pub. 2002/0176189) is cited for input/Output multiplex system for a read/write channel in a disk drive. Bhandari et al. (U.S. Pat. 6,424,475) is cited for magnetic head conductivity testing. Ionescu (U.S. Pat. 6,304,403) is cited for multiple devices selected fault feature for data integrity in disc drive application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C. Olson whose telephone number is (571)272-7560. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571)272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


JASON OLSON 7/8/07
PATENT EXAMINER